



Illinois Department of Transportation

Memorandum

To: DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS
From: Dianna L. Taylor
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: February 19, 2016

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement February 22, 2016 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m. on Friday, March 4, 2016**. Applicants will not be accepted after that time and date.

NOTE: Applications will be accepted from qualified permanent DOT employees only. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Denise Hamilton or Jennifer Sunderland at 217/782-5594.

TM VI

Chief Chemist
Bureau of Materials & Physical Research
Highways
Springfield

Attachments
40781

Technical Applications (PM 1080) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) by **Friday, March 4, 2016, 4:30 p.m.** Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews. **NOTE: Applications will be accepted from qualified permanent DOT employees only. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.**



Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification: Technical Manager VI

Salary Range: \$6,535 - \$11,020

Position Title: Chief Chemist

Union Position: ☒ Yes ☐ No

Position Number: PW416-23-50-702-10-01

IPR#: 40781

Office/Central Bureau/District/Work Address:

Division of Highways/Bureau of Materials & Physical Research, 126 East Ash, Springfield, IL

Description Of Duties:

This position is accountable for managing the Chemical Tests Unit. This includes evaluating and developing material formulation concepts and specifications; the supervision and technical guidance in the chemical testing of contractual materials, and the approval of these materials before being incorporated in the Department of Transportation's construction and maintenance programs.

Special Qualifications:

The following criteria is required:

- Valid driver's license
- Overnight travel.

The following criteria is desired:

- Knowledge, skill and mental development equivalent to the completion of four years of college with a well-balanced background in analytical chemistry or a bachelor of science in chemistry or chemical engineering
- Extensive knowledge and experience in performing a wide variety of chemical and physical tests on numerous highway materials with a minimum of five years' experience in supervising the activities within a chemical testing laboratory
- Extensive knowledge and experience in the operation and routine maintenance of various sophisticated chemical testing instruments and computers
- Ability to direct and supervise the preparation of complex technical reports, test procedures, and specifications
- Ability to develop and maintain cooperative relationships with all department staff
- Strong oral and written communication skills

Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

***THIS POSITION IS COVERED UNDER THE REVOLVING DOOR PROHIBITION (RDP) POLICY.**

**ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION**

DATE:	December 20, 2015	POSITION:	Chief Chemist
APPROVED BY:	<i>Justan Mann</i>	OFFICE/DIVISION:	Division of Highways/Bureau of Materials & Physical Research
CODE:	PW416-23-50-702-10-01	REPORTS TO:	Engineer of Tests

Position Purpose

This position is accountable for managing the bureau's Chemical Tests Unit. This includes evaluating and developing material formulation concepts and specifications, the supervision and technical guidance in the chemical testing of contractual materials, and the approval of these materials before being incorporated in the Department of Transportation's construction and maintenance programs.

Dimensions

Annual Operating Budget	\$50,000.00
Number of Staff Reporting	3
Testing Equipment Value	\$1,000,000.00
Material Contract Values	\$400 M Annually

Nature and Scope

This position reports to the Engineer of Tests. Reporting to this position are the Field Operations Chief, Analytical Laboratory Supervisor and the Asphalt Laboratory Supervisor.

This position manages the chemical tests unit which provides the chemical expertise for product formulations, utilizations, recommendations and specifications. This position organizes and directs chemical and physical tests to determine the quality of materials used in the Department's statewide construction and maintenance projects as compared with the quality required by the specifications.

Typical challenges for this position include making recommendations as to the impact on product durability and desirability caused by the substitution and/or elimination of environmentally undesirable or expensive components; developing an intimate knowledge of chemical and physical characteristics for raw materials refined to produce reliable products under the ever changing petro chemical, solvent and energy industry; providing a flexible testing program through industrial recognition and cooperation; developing and implementing innovative test procedures and techniques recognized within the trades and accepted as a recommended practice or specification by one or all of international consensus testing societies that will assure steady flow of acceptable quality materials to construction and maintenance projects; managing a limited staff to maintain the testing and sampling program in compliance with Departmental specifications and policies; and providing timely testing and evaluation service to material producers (including, but not limited to, refineries, terminals, emulsion plants, sign sheeting manufacturers, and paint & solvent manufacturers) in an efficient manner and making decisions concerning approval or rejection of marginal materials.

The incumbent makes recommendations to the Engineer of Tests for the hiring of personnel, the assignment of duties (according to seasonal demands, technical abilities and workloads), and needs of major equipment for the Chemical Tests Unit. S/He is responsible for evaluating and developing special tests to determine adequacy of materials proposed as substitutes for standard commodities and development of special field tests which determine the effectiveness of field preparation efforts prior to product incorporation in the work such as premixing multiple ingredients, adhesives and sealers. The incumbent is involved with day-to-day activities of the subunits within the asphaltic materials, paints, paint components, glass beads, reflectorized sheeting, de-icing materials, adhesives, and many other materials used in the maintenance and construction of highways. S/He is responsible for evaluating and developing specifications to assure that materials acquired are acceptable, and provides information to suppliers regarding tests utilized to determine compliance with specifications. S/he initiates reviews of new and existing materials (considering economic, environmental, durability, and other factors) and recommends changes where experience and technical expertise indicate improvement is expected. S/He develops implementation schedules for newly formulated products and investigates the feasibility of utilizing industrial sludge and by-product materials (such as sulfur, fly ash, boiler slag and all sorts of gob materials) in transportation associated structures. S/He also assists District offices, other Central Bureaus, and Local Public Agencies by providing expert technical advice.

To perform his/her functions, the incumbent utilizes the following staff:

Field Operations Chief, who is accountable for managing the Department's bituminous materials and other chemical products inspection programs, provides liaison with producers/suppliers of chemical products, supervises field personnel and coordinates activities with the central laboratory, and oversees the Bureau's Hazardous Waste Program as Site Emergency Coordinator and Hazardous Waste Manager.

Supervising Chemists, who coordinate the performance of tests, analyze results, and maintain laboratory equipment.

The work for this position is performed with a minimum amount of supervision. The incumbent is directly responsible for assuring that testing of materials is expediently and efficiently performed. The incumbent has the authority to reject a specific lot of materials for commodities due to unsatisfactory tests results. S/He is guided by standard specifications for material compliance but can make modifications due to local requirements. S/he is responsible for maintaining laboratory operations in compliance with the AASHTO Materials Referenced Laboratory Program, and with the National Bureau of Standards Cement and Concrete Reference Laboratory inspection program, with the Illinois Department of Labor safety inspection, and a sampling and testing of materials program meeting the FHWA participation requirements. Through his/her industrial contacts, s/he is responsible for the evaluation and implementation of new innovative test and evaluation programs and ultimate inclusion of such programs in the standard laboratory practice.

The incumbent has frequent contacts with District personnel to advise them of the quality of products tested. S/He frequently contacts the Central Bureaus of Bridges and Structures, Construction, Operations, Local Roads and Streets, Safety Engineering and Design and Environment to discuss and advise specification revisions and special provisions, with the Office of Finance and Administration's Employee Services Section regarding laboratory safety and Safety Data Sheets, and with the FHWA concerning sampling and testing procedures. S/He is in contact with unit heads in the Bureau of Materials and Physical Research regarding samples of materials, test results, consultations, and the testing of new products. S/He has frequent contacts with industry sources to discuss and establish procedures for sampling, testing, and material certification requirements of the Department. This position may require overnight travel.

The effectiveness of this position is measured by the ability of the incumbent to utilize his/her management skills to assure proper testing of materials, disbursement of data, the ability to provide knowledgeable consultations and to provide a cooperative working environment between his/her unit and other units of the Department.

Principal Accountabilities

1. Provides consultations and interpretations of test results to assure that materials meet the Department's specifications.
2. Prepares correspondence and reports to assist the Engineer of Tests in notifying concerned parties of the Bureau's decisions and recommendations.
3. Develops and motivates a competent staff to accomplish objectives, and provide a workable environment among his/her staff and others through productive management.
4. Directs inspection activities at the various refineries and paint companies statewide, accommodating widely divergent and unstable schedules to assure that our inspection services and materials are satisfactory.
5. Develops procedures, guidelines, and policies for inspection of commodities to assure procurement of high quality materials.
6. Prepares specifications for materials to establish standards for manufacturing and procurement.
7. Initiates reviews of existing materials being used in Department work to isolate problem areas.
8. Confers with manufacturers and producers to assist in procurement of best available materials and commodities and replacement of environmentally objectionable products.
9. Reviews and revises specifications to accommodate the use of new commodities, processes, and technologies.
10. Directs implementation of sophisticated instrumental procedures into standard laboratory practice and eventually specification language.
11. Maintains laboratory operations in compliance with applicable National and State programs
12. Ensures subordinate compliance with all Departmental safety rules, practices and procedures.
13. Ensure that proper procedures for handling, storing, shipping, and disposing of hazardous materials and wastes.
14. Serves as the bureau's chemical hygiene officer.
15. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
16. Performs other duties as required or assigned.